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ABSTRACT

An Educational Resources Management System (ERMS) provides a model for adapting a planning-programing-budgeting system (PPBS) to decisionmaking in local educational districts. Initially, educators set the educational goals of their districts, from which programs are designed to produce outcomes compatible with the initial objectives. Evaluation, often forgotten in systems approaches, is vital to the success of an educational system. Rather than emphasize accounting procedures, ERMS focuses on the effective accomplishment of educational objectives. (RA)

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"PPBS: A NATIONAL CONCEPTUAL DESIGN"

by

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The accepted abstract for this presentation included the following objectives:

1 - To discuss the basic concepts of the USOE-funded Association of School Business Officials Research Corporation project to develop a model (Educational Resources Management System) of PPBES (Planning, Programming, Budgeting and Evaluation System) for local public education.

2 - To discuss the operational structure for PPBES built around utilizing objectives in the cognitive, affective and psychomotor domains.

The Research Corporation in its acceptance of the contract for this project agreed to be responsible for:

1 - A survey of the field to determine the extent to which school districts in the United States have or are planning to adopt the PPBES concept as a new approach in support of decision making at the local level.

2 - The dissemination of information regarding the potential of PPBES for adaptation by the local school districts as well as the sharing of information as work on the project progressed.

3 - The preparation of a conceptual design which will utilize the PPBES concept and which might serve as a guide for local school districts as they attempt to design, develop and implement their own version of the system.

The Public School System of Dade County, Florida has been a partner in this project since its inception.

The Educational Resources Management System (ERMS) should be considered as a basic conceptualization of a planning-programming-budgeting-evaluating system (PPBES) application. The system is designed for application to more effective management of resources in local school districts. The major processes of the ERM System as presented in this discussion are not new to educators nor the field of education. The uniqueness centers in

(1) the interrelationship of the major processes, (2) the implications for the evolvement of a much greater sophistication in the operation of each of the processes, and (3) the potential for improvement in the management of local public education systems through better decisions as to how educational resources are allocated and utilized.

To a degree the guidelines for the development of the ERM System were a set of assumptions which are based on a combination of observations of education and of observations reported for planning, programming, budgeting systems (PPBS) used in industry and in the federal government. These assumptions which will appear in RC-ASBO's forthcoming report on the ERM System are listed as follows (in capsule form):

1 - The resources available to the school system are less than equal to the demands of the system.

2 - The school system exists to produce a set of outcomes - to achieve certain objectives expressed as specific changes in the characteristics of the learner.

3 - The objectives of a school system can be achieved, theoretically, in a multitude of ways (program plans) some of which are more effective and/or efficient.

4 - The productivity of a school system can be increased by the organization of learning activities and supporting services into programs specifically directed toward achieving previously defined goals and objectives.

5 - Better decisions regarding program plan selection and greater benefits from their operation result when the costs thereof are considered on a long term (multi-year) basis.

6 - Better decisions regarding program plan selection and greater benefits from their operation result when outcomes are related, methodically, to objectives.

Note - From this point on in this presentation the material displayed is, for the most part, a condensation of that which will appear in Chapter III of the RC-ASBO project document which is slated for completion June 30, 1971.

As indicated earlier the major processes of the ERM System are planning, programming, budgeting and evaluating. The key relationship among these processes is the mutual function of providing support for decision making. Decision making is the central activity of the ERM System. It is assumed that decision making will be directed toward achieving the most effective use of available resources (e.g., people, time, values, materials, environment) to accomplish the highest attainment of specified educational outcomes (e.g., growth of the learner in achievement, skills, attitude).

In the ERM System it is essential that there be a continuous information flow to each and among the major processes. Each process requires information, not only from each of the other processes, but from sources external to the school system also. These external sources may be people who are not directly part of the school system or the sources may be other agencies and institutions within society. Regardless of its source, it is most important to the ERM System that this information be analyzed carefully and the results of this analysis be reported accurately. Careful analysis and reporting are essential for strengthening the effectiveness of the decision makers.

In the ERM System planning is defined as the process of guiding internal change so that the school adapts effectively to the dynamic society of which it is a part. In capsule form the major steps in the planning process are:

1 - Establish and organize a task force for planning.

2 - Identification - needs, problems, resources.

3 - Identification and selection of goals.

4 - Developing priorities

5 - Analysis

6 - Development - tentative general objectives and potential programs.

7 - Adoption of goals, general objectives and programs as part of the planning policy of the Board of Education.

8 - Recycling - as required.

At this point it should be noted that planning must be carried out within each of the other processes of an ERM System. Also, some evaluating is done in planning, programming and budgeting. Similar statements could be made for each of the processes. However, for purposes of describing the ERM System, it is necessary to have each of the processes thought of as being mostly discrete but carefully coordinated and interrelated sub systems of the overall Resources Management System.

Programming as used in the ERM System is defined as the process of developing configurations of inter-related learning activities and support services (program plans) with each configuration representing a design for attaining a performance objective(s). The major steps in the programming process (in capsule form) are:

1 - Creation of professional teams for programming.

2 - Generating performance objectives.

3 - Developing and analyzing alternate program plans.

4 - Communicating recommendations.

5 - Recycling.

The steps in the programming process are built around the development of the program plans. These steps include the consideration of alternate program plans. From analysis, recommendations are made to planning toward the final determination of the school district programs.

It has been recommended that a program plan, when completed, will include information as follows:

1 - Program Name
2 - Program objectives (including performance objectives as required)
3 - Target populations
4 - Content
5 - Organization
6 - Procedures (e.g., learning experiences)
7 - Sequence
8 - Relationships
9 - Operating responsibilities
10 - Required resources
11 - Performance criteria
12 - Projected effectiveness
13 - Time frame

Thus far, it will be noted, there has been considerable emphasis upon the learner and the establishment of programs for him which will be goal-objective oriented. Therefore, it is essential that the same principle be followed as these programs are integrated into a program structure which in turn serves as the format for the program budget. The

program structure serves as the basic framework for the analytical effort of the ERM System and it is fundamental in a study of the relationship between the traditional budget and the program budget.

The resource analysis study in the second section of RC-ASBO's forthcoming document required a sample program structure. A study of existing program structures throughout the country showed that they were, for the most part, based upon school organization patterns rather than upon goal-objective orientation. Consequently, the RC-ASBO team developed a program structure which it feels is goal-objective oriented and which lends itself to a more meaningful display of resource allocation in the program budget.

The time limitation for this presentation precludes the possibility of outlining the entire program structure. However, some explanation is necessary so as to relate further to the objectives of this presentation.

The theoretical program structure of the ERM System suggests eleven major programs which are:

1 - Intellectual Skills Development

2 - Understanding the Environment

3 - Personal Development

4 - Exploratory Studies

5 - Preparatory/Post Secondary Education

6 - Preparatory/Post Secondary Employment

7 - Management

8 - Educational Media Services

9 - Facilities Services

10 - Pupil Services

11 - Community Services

There are two other levels in this program structure which have been entitled sub programs and program elements.

Examples of the sub programs under the major programs of Intellectual Skills Development are:

1 - Communication Skills

2 - Computation Skills

3 - Reasoning Skills

The program elements under Communication Skills are:

1 - Listening

2 - Oral

3 - Reading

4 - Writing

5 - English

6 - Additional languages

7 - Spelling

8 - Handwriting

etc.

The program elements under Computation Skills are:

1 - Number Skills

2 - Mathematics

3 - Problem Solving

etc.

The program elements under Reasoning Skills are:

1 - Deductive

2 - Inductive

3 - Problem Solving

etc.

Examples of sub programs under Understanding the Environment are:

1 - Culture

2 - Behavioral Sciences

3 - Life Sciences

4 - Physical Sciences

Program elements under each of the above include the subject areas which relate in a natural manner (e.g., Health, Biology, Zoology, etc. would fall under Life Sciences whereas Earth Science, Chemistry, Physics, etc. would fall under Physical Sciences).

Because the ERM System is designed to serve as a support for decision making it seemed logical to the RC-ASBO Team to include Management as a major program in the theoretical program structure. Under the heading of Management the sub programs are:

1 - Superintendent

2 - Planning

3 - Program Coordination

4 - Program Operation

5 - Management Services

It is important to note at this point that decisions regarding programs are made in Planning, supported by information from each of the other processes. Although budgeting retains importance as one of the four inter-related processes its' role changes to some degree in an ERM System.

In the ERM System, budgeting is defined as the process which involves, in addition to final reconciliation of programs and available resources according to established priorities, the preparation of the budget documents, the approval by a board of education, and the execution of the budgetary plans insofar as this involves management of, accounting for, and reporting use of resources. Specifically, it is a budgetary function to accomplish final reconciliation among all available resources and all selected program plans as these have been organized for implementation and operation.

Budgeting within the ERM System can be characterized as a process which involves procedures such as the following:

1 - Defining capabilities and organizational relationships required for budgeting in the ERM System.

2 - Reconciliation - program requirements and available resources.

3 - Developing budget documents.

4 - Managing, accounting, and reporting use of resources.

5 - Recycling.

Historically, earlier attempts to apply the PPBS concept to education have stressed program accounting primarily. However, the RC-ASBO Team in its development of the ERM System has placed prime emphasis upon effective accomplishment of objectives rather than upon objects of expenditures.

A crucial aspect of the ERM System rests with the question of how well the programs have operated.

Evaluation in the ERM System is defined as the process of measuring the degree of attainment of objectives. The evaluating process within the ERM System involves:

1 - Defining and establishing internal and external capabilities and organizational relationships required for evaluating in the ERM System.

2 - Accomplishing planned basic evaluation of the learners progress from entry into a program until the time when he leaves it.

3 - Performing ancillary evaluation.

4 - Recycling.

It has been stated that in the ERM System all of the processes must be interrelated and supportive of one another. Although each process will require considerable skill in development, it seems likely that planning and evaluating will require the most expertise over extended periods of time. The expanding role of analysis within the planning process will call for much more in the way of analytical skills. Another factor to consider will be the need for developing much more skill in handling objectives -- not only long range goals and general objectives, but performance objectives also as an integral part of program plan development.

Obviously, the application of the PPBES concept to the field of education is a very complex process, especially

when it involves human beings and their development. Therefore, it should be recognized that the outcomes of this project and others now under way represent only the beginning of the developmental process. Much more in the way of research and development will be needed and should be encouraged and supported.